

THE TAFF VALE VIADUCT, SOUTH WALES.—A paper descriptive of the viaduct near Quaker's-yard, on the Taff Vale Railway, was lately read by Mr. S. Downing, C.E., at the Institution of Civil Engineers of Ireland. The viaduct was designed by Mr. Brunel, to carry the main line of the railway over the river Taff, at a point where such crossing was unavoidable. The total length was 470 feet, and greatest height 105 feet, consisting of six semi-circular arches, each 50 feet in span, resting on pillars, whose horizontal section was a regular octagon, 5 feet 9½ inches in the side, giving 14 feet as their diameter. The whole structure was upon a curve of 1,320 feet radius, and at the point where it was determined to build, the axis of the river made an angle of 45 degrees, with the direction of the tangent to the curve. One of the chief merits of the design was the avoidance of the difficulties and expense of an oblique bridge with spiral courses in addition to those of curving. The stone was of the blue Penant grit, and obtained in the immediate vicinity of the works. The lime used was the Aberthaw hydraulic limestone. The foundations on the north side, including one of the river piers, were on rock on indurated gravel; but on the south side the abutment, one land and one river pier, had to be sunk to a far greater depth than originally designed. The real difficulty in the construction was found to be the management of the spandril walls on the concave side, so as to gain the true uniform curvature at the string course under the parapets, as on the concave side they had to gather out the courses of the spandrils about 4 inches, which, from the excellent quality of the stone, they were enabled to do.

CORK.—Captain Washington, R.N., held an inquisition at the Corn Exchange, on the 7th, on the subject of docks, and the result was most satisfactory to the dock promoters. At the close of the investigation, Captain Washington stated, that from the evidence adduced in favour of the project, he had no hesitation in stating it as his conviction, that the Admiralty would recommend the matter to the favourable consideration of the Government. Messrs. Paul and M'Swiny, iron-founders of this city, have contracted for erecting the passenger-shed roofs of the Cork and Passage Railway at the Cork terminus. The roofs are about 300 feet long and 57 feet span. The girders are of T iron, with tie rods and braces of 1½ inch round iron, and of very light construction.

RAILWAY JOTTINGS.—On Wednesday in last week the second tube of the Menai bridge was lowered to its permanent seat on the Carnarvonshire side, in the presence of Mr. Stephenson. An extension of three-sixteenths of an inch took place, denoting great rigidity. The gale of Wednesday, and again on Saturday, when the wind was at right angles with the bridge, did not affect the structure in the least, it is said, though a pressure of seventeen and a half pounds to the square foot was ascertained. The line will be in readiness for opening in about four weeks. The first, or experimental, train is to go through on 1st March. —It is rather an odd circumstance that, already, since we noticed the very unusual fact of a locomotive boiler explosion having occurred near Newcastle, another has taken place near Darlington, in which both driver and stoker were killed. We trust this coincidence is no way indicative of the destined line of future efforts to make up the lee-way of past drawbacks in the railway world. —From a return just issued, it appears that the length of new line authorized in session 1849 was 16½ miles; and length of deviations 26½ miles. Capital authorised to be raised by shares, 3,146,500*l.*; by loans, 764,831*l.* In addition to 34 Acts relative to these, there were two Acts passed incorporating companies for railways in India—Great Indian Peninsular, 500,000*l.* capital, and 166,666*l.* loan; East Indian, capital 12,000,000*l.* Another return gives the following comparative statement of the traffic on all the railways in the United Kingdom, for the five years ending June 30, 1849:—

Years.	Passengers.	Receipts.	Goods.
1844	32,791,383	£25,976,341	£23,323,373
1845	43,789,002	4,775,711	2,840,363
1846	51,321,161	5,104,009	3,269,862
1847	57,986,879	5,799,207	4,213,109
1848	66,398,120	6,106,876	5,094,326

EVELYN ON THE STATE OF LONDON.—It may not be known to some of your readers that Evelyn wrote a pamphlet upon this subject. This was nearly 200 years ago, and it is unnecessary to say how much greater the evils which he denounces have now become. After describing the "sweet and agreeable eminency" on which London is built, he enlarges much upon the great nuisance of such dense volumes of smoke continually poured forth from the factories, so much as to poison all vegetable substances. As to Smithfield market and intramural burying,—upon the latter subject he says—"Is there under heaven such coughing and snuffling to be heard as in London churches? where the barking and spitting are incessant and most importunate; and truly am I persuaded that the frequency of churchyards and charnel-houses contaminates the air as well as the pumps and water." He quotes against the driving of cattle through the streets the *Lex Carnaria* of the Romans, who absolutely forbade them to kill, or have slaughter-houses, within the walls of the city. His remedy I will quote in full:—"I propose, therefore, that by an Act of this present Parliament this infernal nuisance be reformed, enjoining that all the works be removed five or six miles from London below the river Thames, or at least so far as to stand behind that promontory jutting out and securing Greenwich from the pestilential air of Plumstead marshes—whereas, being seated behind that mountain, which seems to have been industriously elevated, no winds, or other accident whatever, can force it though that solid obstacle."—S.

ARCHITECTURAL ASSOCIATION.—At the meeting held at Lyons Inn Hall, on Friday, the 15th of February, the president, Mr. C. Creeke, in the chair, a paper was read by Mr. John P. Seddon, on "Progress in Architecture," to which we shall recur hereafter. In the discussion which ensued, it was generally agreed that progress is not to be looked for in the adoption, by common consent, of any new or universal style, or in the revival of any system of past ages; but by a straightforward attention to the necessities of construction, which, if studied simply, without reference to the trammels of past associations, must lead to an architecture in character with the wants and feelings of the age, which is essentially many-sided, commercial, practical, and economical; whereas in older days the ecclesiastical, feudal, and kingly rule were successively predominant. The necessity was urged of architects themselves taking up their profession in a higher and purer spirit, refining their taste by a careful study of the beauty of form, especially as displayed in the vegetable world, and, in the most perfect of all forms, the human figure. Reference was made to works showing progress in the present day being not copies, but adaptations and improvements of pre-existing styles. Notice was then given that the arrangements had been concluded with the New Society of Water-colour Painters for holding the annual Architectural Exhibition in their Gallery in Pall Mall during the months of August and September, and the meeting was adjourned till February 29.

COAT OF ARMS OF CHESHIRE.—Some time ago, Colonel the Hon. Sir Edward Cust was requested by his brother magistrates of Cheshire to determine the arms of the county, with a view of having them placed in front of the county asylum. The manner in which the worthy colonel pursued the investigation was fully explained in the statement which he presented to the Historic Society of Lancashire and Cheshire. The arms are now completed, and the pediment over which they are placed is 36 feet by 7 feet 4 inches: on this rests the sword of Hugh Lupus, which forms the base-memorial; and this is encircled with a ribbon, and the motto, *Jure et dignitate gladii*. In the centre of the arms are three garbs of wheat-sheafs; the supporters are two wiverns of the order of dragons, grasping the feathers, allusive to the title of Chester, borne by the Princes of Wales, and showing the connection with the Tudor sovereignty and the principality. The shield is crowned with an antique coronet, and as, Sir Edward Cust says, "the earls of Chester were never earls of parliament," the coronet is "not borne with a caul or bonnet." The arms are surrounded with carved-work foliage, and were executed by Mr. George Haswell, of Chester.

MURAL PAINTINGS IN PARIS.—Many old paintings have lately been discovered in churches in Paris and different parts of the country, after having been buried for centuries under coats of whitewash or plaster. Only the other day, in the cathedral of Clermont Ferrand, a fine fresco (?), dating from the fourteenth century, and representing Christ crucified, with St. John and the Virgin Mary at the foot of the cross, was brought to light. The Paris correspondent of the *Literary Gazette*, says, "These discoveries have, I hear, caused the Government to take measures for having all the cathedrals and churches of France minutely examined, as it is considered probable that there are an immense number of mural paintings still in existence, though all trace is lost of them beneath the whitewash of barbarians."

YOUNG ARTISTS.—I have often observed in criticisms of the exhibitions of painting, that seldom, if ever, is a rising artist taken any account of, let his works be as good as they may; the critics looking merely to those who have obtained names. I think, Mr. Editor, this is a hurtful mistake. The junior part of the profession ought to be spoken of (not passed over in the way they are) to encourage and spur them on to greater efforts. A young artist, sending year after year, and finding no notice taken of his work, must be discouraged. I do not of course mean to say all the works should be criticised, but those showing improvement and progress.—H.

PUBLIC LIBRARIES.—Mr. Ewart's motion for leave to bring in a bill to enable town-councils to establish public libraries and museums, was agreed to without a word of dissent—indeed, without observation of any kind. On the motion of Mr. Ewart also the committee on public libraries has been re-appointed.

POLITICAL PRIVILEGES IN "MODEL HOUSES."—That persons who enter model lodging-houses may not wholly sacrifice their right to a voice in the election of Members of Parliament, I would suggest that the parties occupying the dwellings should be furnished with a ballot-box when elections are going on, and that the majority of votes govern the proprietors in voting. E.

LOOK ON THIS PICTURE AND ON THAT.—It is known to all the world that immense fluctuation has taken place in the price which the share-market affixed to railway shares in 1845 compared with that which it affixes in 1850; but still it may not be a minute misapprehension to look at the following pictures for the sake of the contrast:—

Prices quoted, Aug. 20, 1845.	Prices quoted, Feb. 9, 1850.
Price.	Price.
London and North West. era, 1845, paid 335	London and North West. era, 1845, paid 116
Great Western, 1845, paid 212	Great Western, 1845, paid 68
York and North Midland, 1845, paid 168	York and North Midland, 1845, paid 44
Midland, 1845, paid 172	Midland, 1845, paid 183
Calcutta, 1845, paid 104	Calcutta, 1845, paid 12
Oxford, Worcester, and Wolverhampton, 1845, paid 74	Oxford, Worcester, and Wolverhampton, 1845, paid 10
Brighton, 1845, paid 70	Brighton, 1845, paid 83

The causes of this grievous fluctuation are also pretty well known. The principal are—mismanagement, parliamentary oppression, shareholders' weakness and folly, and the public's want of confidence.—*Herapath's Journal*.

TENDERS

For the Lancashire Lanthan Asylum: Mr. J. K. Hamilton, architect:—

W. and T. Cooper, Derby	£41,000
Hutchinson and Son, Hull	40,900
C. Ward, Lincoln	40,018
C. Bennett, London-road, Lynn	39,700
W. Simons, Brook-street, Hull	39,500
C. Lindley, Mansfield	38,500
Lucas and Son, Lowestoft	38,113
T. and W. Piper, London	37,500
J. W. Costar, London	36,433
Neale and Wilson, Grantham	36,000
Trego, London	35,978
G. Myers, London (accepted)	33,670

MEETINGS OF SCIENTIFIC BODIES

To be held during the ensuing week.

THURSDAY, 28.—Institution of Civil Engineers, 8 p.m.
THURSDAY, 28.—Royal Society, 8½ p.m.; Society of Antiquaries, 8 p.m.
FRIDAY, March 1.—Archaeological Institute, 4 p.m.; Architectural Association, 8 p.m.